First Hit Previous Doc Next Doc Go to Doc#

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L4: Entry 1 of 2 File: JPAB Aug 13, 1982

PUB-NO: JP357130954A
DOCUMENT-IDENTIFIER: JP 57130954 A
TITLE: ESTERIFICATION

PUBN-DATE: August 13, 1982

INVENTOR-INFORMATION:

NAME	COUNTRY
IZUMI, YUSUKE	

US-CL-CURRENT: 560/237
INT-CL (IPC): C07C 67/08; B01J 21/18; B01J 23/24; B01J 27/18

ABSTRACT:

PURPOSE: In esterifying an acid with an alcohol, to obtain an ester in high yield with suppressing the occurrence of an ether, etc. as by-products free from the elution of a catalyst component to a reaction system, by using a catalyst with a carrier as a catalyst obtained by supporting a heteropolyacid on active carbon.

CONSTITUTION: Using a catalyst with a carrier obtained by supporting a heteropolyacid such as 12-molybdophosphoric acid, 12-tungstosilicic acid, 12-tungstoboric acid, etc. or its salt such as a metal salt of theIgroup, II group, III group, IV group, etc. of periodic table on active carbon, an acid is reacted with an alcohol to give an ester. The supported amount of the heteropolyacid is 5~20wt% preferably 10~15wt%. The catalyst is obtained by adding a given amount of active carbon to a solution of the heteropolyacid, stirring them sufficiently for a fixed time to adsorb the heteropolyacid on the active carbon, fitering and removing the active carbon, washing it until no heteropolyacid is observed, and, if necessary, drying it.

Previous Doc Next Doc Go to Doc#

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=> s ethyl acetate/cn
L2          1 ETHYL ACETATE/CN

=> d

L2   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   141-78-6  REGISTRY
CN   Acetic acid ethyl ester (8CI, 9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Acetic acid, ester with EtOH (7CI)
OTHER NAMES:
CN   Acetic acid, ethyl ester
CN   Acetic ether
CN   Acetidin
CN   Acetoxyethane
CN   Ethyl acetate
CN   Ethyl ethanoate
CN   EtOAc
CN   NSC 70930
CN   Vinegar naphtha
FS   3D CONCORD
MF   C4 H8 O2
CI   COM
LC   STN Files:   AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*,
       DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2,
       GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
       MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*,
       SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL,
       VETU, VTB
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA  CAplus document type:  Book; Conference; Dissertation; Journal; Patent;
       Preprint; Report
RL.P   Roles from patents:  ANST (Analytical study); BIOL (Biological study);
       CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC
       (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process);
       PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role
       in record)
RLD.P  Roles for non-specific derivatives from patents:  ANST (Analytical
       study); BIOL (Biological study); PREP (Preparation); PRP (Properties);
       RACT (Reactant or reagent); USES (Uses)
RL.NP  Roles from non-patents:  ANST (Analytical study); BIOL (Biological
       study); CMBI (Combinatorial study); FORM (Formation, nonpreparative);
       MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC
       (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses);
       NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents:  ANST (Analytical
       study); BIOL (Biological study); FORM (Formation, nonpreparative); PREP
       (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or
       reagent); USES (Uses)


Et--O--Ac


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

          24592 REFERENCES IN FILE CA (1907 TO DATE)
            111 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          24624 REFERENCES IN FILE CAPLUS (1907 TO DATE)


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FILE COVERS 1907 - 30 Aug 2004  VOL 141 ISS 10
FILE LAST UPDATED: 29 Aug 2004  (20040829/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s 141-78-6/prep
         24634 141-78-6
       3189446 PREP/RL
L3        1508 141-78-6/PREP
                (141-78-6 (L) PREP/RL)

=> s 141-78-6/proc
         24634 141-78-6
       3543731 PROC/RL
L4        2287 141-78-6/PROC
                (141-78-6 (L) PROC/RL)

=> s l3 or l4
L5        3693 L3 OR L4

=> s l5 and acetic acid and ethanol
        205019 ACETIC
       3861313 ACID
        177854 ACETIC ACID
                (ACETIC(W)ACID)
        216862 ETHANOL
L6         538 L5 AND ACETIC ACID AND ETHANOL

=> s l6 and silica
        444481 SILICA
L7          31 L6 AND SILICA

=> s l7 and heteropolyacid
          1163 HETEROPOLYACID
L8           0 L7 AND HETEROPOLYACID

=> s l6  and heteropolyacid
          1163 HETEROPOLYACID
L9           0 L6 AND HETEROPOLYACID

=> s l7 and catalyst
        664573 CATALYST
L10         21 L7 AND CATALYST

=> s l10 and py<2000
      19724346 PY<2000
L11         13 L10 AND PY<2000
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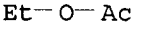
=> d .1-5 ibib abs hitstr

L11 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:760399 CAPLUS
DOCUMENT NUMBER: 132:53987
TITLE: VOC removal: investigation of ethylacetate oxidation over supported Pt catalysts
AUTHOR(S): Papaefthimiou, P.; Ioannides, T.; Verykios, X. E.
CORPORATE SOURCE: Department of Chemical Engineering, University of Patras, Patras, GR-265 00, Greece
SOURCE: Catalysis Today (**1999**), 54(1), 81-92
CODEN: CATTEA; ISSN: 0920-5861
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Oxidation of ethylacetate in trace amts. in air was studied over supported Pt catalysts. Steady-state kinetic expts. showed that Pt dispersed on W6+-doped TiO2 was the most active **catalyst**. **Acetic acid** and acetaldehyde were the main byproducts at low and intermediate conversions. Temperature-programmed desorption (TPD) and oxidation (TPO) of labeled ethylacetate, (13CH313COOCH2CH3), as well as differential scanning calorimetry (DSC) of ethylacetate, NH3, and CO2 were used to obtain information on surface processes occurring under heating in inert or oxidizing atmospheric and on the acidic/basic character of the support surfaces. The high activity of the Pt/TiO2 (W6+) **catalyst** under steady-state conditions is attributed to the presence of a large number of acidic sites with appropriate strength on the TiO2 (W6+) surface, leading to the formation of a large pool of highly mobile reactive intermediates.
IT **141-78-6**, Ethylacetate, processes
RL: PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); **PROC (Process)**
(temperature effect on volatile organic compound removal from air by oxidation following adsorption on tungsten-doped, supported platinum catalysts)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:402243 CAPLUS
DOCUMENT NUMBER: 131:171839
TITLE: Study of Rh-Sm-V-Li/SiO2 **catalyst** for CO hydrogenation reaction to C2-oxygenates
AUTHOR(S): Zhang, Wei; Luo, Hongyuan; Zhou, Huanwen; Wu, Zhihua; Huang, Shiyu; Liu, Chongzao; Chu, Huiping; Lin, Peizi; Lin, Liwu
CORPORATE SOURCE: Dalian Inst. Chemical Physics, The Chinese Academy Sciences, Dalian, 116023, Peop. Rep. China
SOURCE: Cuihua Xuebao (**1999**), 20(3), 285-289
CODEN: THHPD3; ISSN: 0253-9837
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB Rh-Sm-V-Li/SiO2 **catalyst** for CO hydrogenation reaction under pressure was studied by TPR, adsorption of CO and H2, and H2-TDP. The addition of Sm, V and Li to Rh/SiO2 improved the activity and selectivity for C2-oxygenates. The yield of and selectivity for C2+-oxygenates can reach 361.7 g/(kg·h) and 59.1% on 1% Rh-0.5% Sm-0.5% V-0.01% Li/SiO2 **catalyst**, resp. The Sm3+ ions on the **catalyst** are difficult to be reduced and thus improved the dispersion of Rh, increasing the uptake of CO and H2 and promoting the formation of **acetic acid** and acetaldehyde. The vanadium ions with higher valence on the **catalyst** are easy to be reduced to those with lower valence, migrate on the Rh surface, and decrease the uptake of CO and H2. The V

•with lower valence had good storage capability for H2, enhanced the ability for hydrogenation and promoted the formation of EtOH.

IT **141-78-6P**, Ethyl acetate, preparation
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(Rh-Sm-V-Li/SiO2 **catalyst** for hydrogenation of CO to C2-oxygenates)

RN 141-78-6 CAPLUS

CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

L11 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:402230 CAPLUS

DOCUMENT NUMBER: 131:171836

TITLE: A study of CO hydrogenation to C2-oxygenates on Rh-Sm/SiO2 **catalyst**

AUTHOR(S): Zhang, Wei; Luo, Hongyuan; Zhou, Huanwen; Wu, Zhijua; Huang, Shiyu; Liu, Chongzao; Chu, Huiping; Lin, Peizi; Lin, Liwu

CORPORATE SOURCE: Dalian Inst. Chemical Physics, The Chinese Academy Sciences, Dalian, 116023, Peop. Rep. China

SOURCE: Cuihua Xuebao (**1999**), 20(3), 259-262
CODEN: THHPD3; ISSN: 0253-9837

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

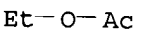
LANGUAGE: Chinese

AB Rh-Sm-V/SiO2 **catalyst** for CO hydrogenation under pressure was studied by temperature-programmed reduction, adsorption of CO and H2, and temperature-programmed desorption of adsorbed H2. The Sm addition improved the activity of the **catalyst** and selectivity for C2-oxygenates. CO conversion of 3.38% can be obtained on 1% Rh-0.5% Sm/SiO2, compared to 1.72% on 1% Rh/SiO2. The yield of and selectivity for C2+-oxygenates formation were increased from 37.4 to 176.1 g/(kg·h), and from 22.3% to 53.9%, resp., under the conditions of reaction temperature 583 K, pressure 3.0 MPa and GHSV 13,000 h-1. TPR profile of Rh/SiO2 and Rh-Sm/SiO2 gave the same area of the reduction peaks. In comparison with 1% Rh/SiO2, the n(H)/n(Rh) and n(CO)/n(Rh) were increased from 0.42 to 0.90, and from 0.67 to 0.81 on 1% Rh-0.5% Sm/SiO2, resp. The Sm3+ ion on Rh-Sm/SiO2 catalysts was difficult to be reduced; it played a role of improving the dispersion of Rh, increasing the adsorption of CO and H2, and promoting the formation of **acetic acid** and acetaldehyde.

IT **141-78-6P**, Ethyl acetate, preparation
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(CO hydrogenation to C2-oxygenates on Rh-Sm/SiO2 **catalyst**)

RN 141-78-6 CAPLUS

CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)



L11 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:627964 CAPLUS

DOCUMENT NUMBER: 129:205166

TITLE: Fuel cell hydrogen production by catalytic **ethanol**-steam reforming

AUTHOR(S): Amphlett, J. C.; Leclerc, S.; Mann, R. F.; Peppley, B. A.; Roberge, P. R.

CORPORATE SOURCE: Royal Military College of Canada, Kingston, ON, K7K 7B4, Can.

SOURCE: Proceedings of the Intersociety Energy Conversion Engineering Conference (**1998**), 33rd, IECEC269/1-IECEC269/7
CODEN: PIECDE; ISSN: 0146-955X

PUBLISHER: Society of Automotive Engineers
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB It is clear that the reaction network that results from catalytic reaction of **ethanol**, with and without steam, is very complex and involves over a dozen potential products. Reactions to avoid are any that lead to C4 species and ethylene - the former representing a more difficult challenge for subsequent steam reforming and the latter providing what is probably the major route to carbon production and "coking" of the **catalyst**. Dehydration reactions, therefore, should generally be avoided. Dehydrogenation catalysts would seem to be most appropriate, especially since the production of hydrogen is the main goal. Copper-based catalysts have been long-established for this function so that they are com. available and therefore lower cost. CuO/ZnO, CuO/SiO2, CuO/Cr2O3 or CuO/NiO/SiO2 may be the best **catalyst** candidates. Reaction pressures should be relatively low (1 to a few atm) and the best reaction temperature could be in the range 350 to 450°. Insufficient exptl. work has been reported to give a clear idea of the required water-to-**ethanol** mole ratio. The stoichiometric value of this ratio is three and it is likely that excess water, although presenting some process complications, will be necessary to minimize yields of CO and CH4. A major new aspect of **catalyst** selection and operation, when comparing **ethanol** to methanol steam reforming, will be **catalyst** deactivation due to temperature
IT **141-78-6P**, Ethyl acetate, preparation
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(fuel cell hydrogen production by catalytic **ethanol**-steam reforming)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:764000 CAPLUS
DOCUMENT NUMBER: 128:79133
TITLE: Performance of doped Pt/TiO2 (W6+) catalysts for combustion of volatile organic compounds (VOCs)
AUTHOR(S): Papaefthimiou, Panagiotis; Ioannides, Theophilos; Verykios, Xenophon E.
CORPORATE SOURCE: Department of Chemical Engineering, University of Patras, GR-26500 Patras, Greece
SOURCE: Applied Catalysis, B: Environmental (**1998**), 15(1-2), 75-92
CODEN: ACBEE3; ISSN: 0926-3373
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The oxidation of benzene and ethylacetate in air over Pt supported on γ-Al2O3, SiO2, TiO2 and TiO2 (W6+) carriers was studied. It was found that doping of the TiO2 support with W6+ cations has a pos. effect on the activity of Pt catalysts for benzene and ethylacetate oxidation A maximum in activity enhancement was observed at a W6+ content of 0.45 atomic% in the TiO2 support. The Pt/TiO2 (0.45 atomic% W6+) **catalyst** is over 2 orders of magnitude more active than the Pt/γ-Al2O3 **catalyst** in the case of ethylacetate oxidation and 1 order of magnitude more active in the case of benzene oxidation Doping of TiO2 with W6+ cations enhances its activity for ethylacetate degradation towards smaller organic intermediates, such as **ethanol**, **acetic acid** and ethylene, and it also affects product distribution. The enhanced activity of the Pt/TiO2 (W6+) catalysts is attributed to complementary bifunctional steps occurring on sites offered by Pt metal and by the support. During oxidation of benzene-ethylacetate-water mixts., benzene oxidation is strongly suppressed in the presence of ethylacetate,

while water acts as an inhibitor for both VOC oxidation
IT **141-78-6**, Ethylacetate, processes
RL: REM (Removal or disposal); **PROC (Process)**
(tungsten-doped platinum/titania catalysts for combustion of volatile orgs.)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 6-10 ibib abs hitstr

L11 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:369616 CAPLUS
DOCUMENT NUMBER: 125:171484
TITLE: Synthesis of C2 oxygen-containing compounds from carbon monoxide and hydrogen on rhodium-containing heterogeneous catalysts under pressure
AUTHOR(S): Mamedov, A. P.
CORPORATE SOURCE: Aktsionernoe Obshchestvo Vserossiiskii Nauchno-Issledovatel'skii Institut Organicheskogo Sinteza, Moscow, Russia
SOURCE: Neftekhimiya (**1996**), 36(2), 132-141
CODEN: NEFTAH; ISSN: 0028-2421
PUBLISHER: Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Rh catalysts for producing **acetic acid**, **ethanol**, and acetaldehyde were tested. The highest activity in the 180-380° temperature range and 2.0-5.0 MPa pressure range was observed for catalysts containing 2.5% Rh supported by wide-porous SiO2 with a sp. surface area of 30 m2/g. La, Ce, and Re can be used as effective promoters. The most efficient of the catalysts examined were stable for 150 h at 10.0 MPa and 300-330°, yielding 55-65 g/(kg h) of **ethanol** or 60-68 g/(kg h) of O-containing C2 products.
IT **141-78-6P**, Ethyl acetate, preparation
RL: BYP (Byproduct); **PREP (Preparation)**
(Rh catalysts for conversion of synthesis gas to O-containing C2 compds.)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

L11 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:348201 CAPLUS
DOCUMENT NUMBER: 125:86009
TITLE: On the mechanism of carbonylation in **acetic acid** and higher acid synthesis from methanol and syngas mixtures on supported rhodium catalysts.
AUTHOR(S): Chateau, L.; Hindermann, J. P.; Kiennemann, A.; Tempesti, E.
CORPORATE SOURCE: LERCSI-EHICS-URA CNRS 1498, 1, rue Blaise Pascal, Strasbourg, 67000, Fr.
SOURCE: Journal of Molecular Catalysis A: Chemical (**1996**), 107(1-3), 367-378
CODEN: JMCCF2; ISSN: 1381-1169
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In high pressure gas phase conditions, methanol and syngas mixts. can be

converted to acetic and higher carboxylic (C3-C5) acids on supported rhodium catalysts in presence of Me iodide. Chemical trapping and FTIR spectroscopic studies show that two mechanisms are involved in the carboxylic acid formation. One is the conventional carbon monoxide insertion model on the rhodium part of the **catalyst**. The second proceeds through the isomerization of Me formate on the support. On the support alone the chain growth stops at the C2-intermediate since no rhodium is present to convert **acetic acid** or Me acetate to **ethanol** or ethoxy species.

IT **141-78-6P**, Ethyl acetate, reactions
RL: BYP (Byproduct); PEP (Physical, engineering or chemical process); RCT (Reactant); **PREP (Preparation)**; **PROC (Process)**; RACT (Reactant or reagent)
(mechanism of carbonylation in **acetic acid** and higher acid synthesis from methanol and syngas mixts. on supported rhodium catalysts.)

RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

L11 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:488078 CAPLUS
DOCUMENT NUMBER: 122:239191
TITLE: Process and catalysts for the carbonylation-transesterification preparation of acetate esters from methanol
INVENTOR(S): Uhm, Sung Jin; Han, Sung Hwan; Oh, Jun Woo; Joo, Oh Shim; Jung, Kwang Deog; Lee, Moon Sang
PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 640583	A2	19950301	EP 1994-111650	19940726 <--
EP 640583	A3	19950802		
EP 640583	B1	20000216		
R: DE, ES, FR, GB, IT				
KR 9606546	B1	19960517	KR 1993-14392	19930728 <--
ES 2144472	T3	20000616	ES 1994-111650	19940726
US 5430178	A	19950704	US 1994-281187	19940727 <--
JP 07149691	A2	19950613	JP 1994-176537	19940728 <--
JP 2807176	B2	19981008		

PRIORITY APPLN. INFO.: KR 1993-14392 A 19930728
OTHER SOURCE(S): CASREACT 122:239191; MARPAT 122:239191

AB Acetate esters are economically produced by the gas-phase carbonylation of MeOH with CO followed by transesterification in a process comprising: (a) carbonylating MeOH with CO to produce a mixture of AcOH (I) and MeOAc (II), (b) separating from the production mixture the I and a mixture of the II and cocatalyst, (c) further separating I and the cocatalyst and recycling the separated cocatalyst to the carbonylation reactor, (d) introducing the separated II into a lower region of a transesterification reactor at a temperature above its b.p., (e) introducing a C≥2 alc. (e.g., EtOH, iso-PrOH, BuOH, etc.) into an upper region of the transesterification reactor at a temperature up to its b.p., (f) transesterifying the II with the alc. in the presence of an acid **catalyst** to produce a mixture containing acetate esters, and (g) recovering the acetate esters from the mixture as a bottoms product while recycling the unreacted II and MeOH to the carbonylation reactor or distillation column. A process flow diagram is presented.

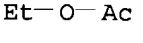
IT **141-78-6P**, Ethyl acetate, preparation
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP**

(**Preparation**)
(process and catalysts for the carbonylation-transesterification preparation of acetate esters)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

L11 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:41199 CAPLUS
DOCUMENT NUMBER: 118:41199
TITLE: Preparation and pretreatment of a palladium-based **catalyst** for preparation of ethyl acetate
INVENTOR(S): Ramos, Ruth Mara Souza; Libergott, Esther Kerdman; Appel, Lucia Gorenstin; De Carvalho, Sonia Elisa; Castro de Almeida, Valeria
PATENT ASSIGNEE(S): Instituto Nacional de Tecnologia, Brazil
SOURCE: Braz. Pedido PI, 17 pp.
CODEN: BPXXDX
DOCUMENT TYPE: Patent
LANGUAGE: Portuguese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 9104562	A	19920616	BR 1991-4562	19911022 <--
PRIORITY APPLN. INFO.:			BR 1991-4562	19911022

AB A 0.1-2.5% Pd/SiO2 **catalyst** for EtOAc manufacture is prepared by ion exchange of SiO2 with an alkaline solution of Pd(NH3)4Cl2, followed by washing to neutrality, drying at 60°, cooling, heating at a rate of 1.0-5.0°C/min, and oxidation of the **catalyst** with O2 (flow of 20-30 mL/min) at 400° for 6 h. The **catalyst** is used to convert EtOH to EtOAc at 70-170°, atmospheric pressure, GHSV of 4000-10,000 h-1, and mol ratio EtOH/air of 0.02-0.03. Yields of approx. 30% and EtOAc selectivity of 65% were obtained at approx. 120°, with the ratio of EtOH to air being held below the inflammability limit. Selectivity for C2H4 increased with temperature, whereas those for MeCHO and AcOH reached min. near 150° and 100°, resp. (6 graphs given).
IT **141-78-6P**, Ethyl acetate, preparation
RL: **PREP (Preparation)**
(manufacture of, by oxidation of **ethanol**, palladium **catalyst** for)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)



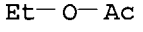
L11 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:635167 CAPLUS
DOCUMENT NUMBER: 115:235167
TITLE: Reforming of **ethanol** - dehydrogenation to ethyl acetate and steam reforming to **acetic acid** over copper-based catalysts
AUTHOR(S): Iwasa, Nobuhiro; Takezawa, Nobutsune
CORPORATE SOURCE: Dep. Chem. Process Eng., Hokkaido Univ., Sapporo, 060, Japan
SOURCE: Bulletin of the Chemical Society of Japan (**1991**), 64(9), 2619-23
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The title reactions were carried out over Cu-based catalysts (Cu, Cu/SiO2, Cu/ZrO2, Cu/Al2O3, Cu/MgO, and Cu/ZnO). The selectivities to AcOEt and AcOH markedly depended on the supports used. AcH was formed by dehydrogenation of EtOH and transformed to either AcOEt or AcOH via nucleophilic addition of EtOH (or EtO ions) or H2O (or OH ions) to AcH. The rates of the transformation steps to EtOAc and AcOH depended on the kinds of supports used. The transformation steps proceeded slowly compared with the dehydrogenation step.

IT **141-78-6P**, Ethyl acetate, preparation
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(preparation of, by catalytic conversion of **ethanol**, effect of **catalyst** supports on selectivity of)

RN 141-78-6 CAPLUS

CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)



L11 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:26126 CAPLUS
DOCUMENT NUMBER: 114:26126
TITLE: Preparations and catalytic properties of single, pair, and monolayer niobium catalysts
AUTHOR(S): Shirai, M.; Ichikuni, N.; Asakura, K.; Iwasawa, Y.
CORPORATE SOURCE: Fac. Sci., Univ. Tokyo, Tokyo, 113, Japan
SOURCE: Catalysis Today (**1990**), 8(1), 57-66
CODEN: CATTEA; ISSN: 0920-5861
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The title catalysts involving single, pair, and monolayer Nb sites were prepared by the reaction between surface OH groups of SiO2 and Nb(η3-C3H5)4, [Nb(η5-C5H5)H-μ-(η5,η1-C5H4)]2, and Nb(OEt)5, resp. The obtained Nb sites were attached to the surface through O atoms, showing Nb-Si bonds besides Nb-O bonds as proved by extended x-ray absorption fine structure. The Nb monomers on SiO2 were active for EtOH dehydrogenation which proceeded on Nb:O bonds with basic character, while the Nb dimers showed dehydration activity to form C2H4 and Et2O, based on acidic character. The Nb monolayers on SiO2 produced EtOAc from EtOH. The monolayer **catalyst** also showed a high activity for the formation of EtOAc from EtOH and AcOH. The Nb atoms were suggested to be nearly uniformly supported in a monolayer-growth mode, where the Nb sites showed the Lewis acidic properties available for the catalytic esterification.
IT **141-78-6P**, Ethyl acetate, preparation
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(preparation of, from **ethanol** and **acetic acid**, niobium-**silica** esterification catalysts for)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

L11 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:424081 CAPLUS
DOCUMENT NUMBER: 103:24081
TITLE: Oxygen-containing compounds
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60032725	A2	19850219	JP 1983-141090	19830803 <--
JP 61014128	B4	19860417		

PRIORITY APPLN. INFO.: JP 1983-141090 19830803
AB O-containing compds. are prepared by the reaction of CO with H in the presence of catalysts comprising Rh, U, and/or Fe as well as Ir, Os, Li, Na, K, or Co. Body thus, a mixture of 2.29 g UO2(NO3)2.6H2O and 10 g **silica** gel in EtOH [64-17-5] was dried in vacuum, calcined in air overnight at 500°, added to a mixture of RhCl3.3H2O 1.2, IrCl4.H2O 0.322, and FeCl3.6H2O 0.37 g in EtOH, dried, and treated with 40 mL/min H and 20 mL/min N during 16 h at .apprx.400° to prepare a **catalyst**. A 1:2 (molar) CO-H mixture was passed over 10 mL of the **catalyst** (containing 30 mL SiO2, pretreated with 200 mL/min H at 300°) at 275°, 51 kg/cm2, and hourly space velocity 12,000 to give MeOH [67-56-1], AcH [75-07-0], EtOH, AcOMe [79-20-9], and AcOEt [141-78-6] with 5.2, 1.6, 41.4, 2.5, and 7.6% selectivity, resp. The conversion of CO was 10.5%.
IT **141-78-6P**, preparation

RL: IMF (Industrial manufacture); **PREP (Preparation)**
(manufacture of, from synthesis gas, catalysts for)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

L11 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1981:46729 CAPLUS
DOCUMENT NUMBER: 94:46729
TITLE: Use of aluminum phosphates in the esterification of **acetic acid** with **ethanol** in the gas phase using the pulse microreactor technique
AUTHOR(S): Vara, E.; Saura Calixto, F.; Marinas, J. M.
CORPORATE SOURCE: Fac. Cienc., Palma de Mallorca, Mallorca, Spain
SOURCE: Afinidad (**1980**), 37(368), 327-31
CODEN: AFINAE; ISSN: 0001-9704
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
AB The esterification of HOAc with EtOH is examined in the gas phase on a pulse microreactor over Kearby type AlPO4/SiO2 and AlPO4/Al2O3 catalysts which are prepared in aqueous medium, using NH4OH as precipitating agent and whose chemical and texture characteristics are determined The reaction conditions are optimized.
IT **141-78-6P**, preparation
RL: **PREP (Preparation)**
(from catalytic esterification of **ethanol** with **acetic acid** in pulsed microreactor)
RN 141-78-6 CAPLUS
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et—O—Ac

Refine Search

Search Results -

Terms	Documents
L2 and silica	16

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L3

Refine Search

Recall Text | Clear | Interrupt

Search History

DATE: Monday, August 30, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ			
L3	L2 and silica	16	L3
L2	L1 and heteropolyacid	44	L2
L1	carboxylic ester and alcohol	8955	L1

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 10 of 16 returned.

☐ 1. Document ID: US 20040049068 A1

Using default format because multiple data bases are involved.

L3: Entry 1 of 16 File: PGPB Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040049068
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040049068 A1

TITLE: Process for preparation of cinnamates using polyaniline salts as catalysts

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Palaniappan, Srinivasan	Hyderabad		IN	
Sairam, Malladi	Hyderabad		IN	

US-CL-CURRENT: 560/128

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

☐ 2. Document ID: US 20030135019 A1

L3: Entry 2 of 16 File: PGPB Jul 17, 2003

PGPUB-DOCUMENT-NUMBER: 20030135019
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030135019 A1

TITLE: Method for producing a polymer, using caprolactam

PUBLICATION-DATE: July 17, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ohlbach, Frank	Dusseldorf		DE	
Winterling, Helmut	Ludwigshafen		DE	
Ansmann, Andreas	Wiesloch		DE	
Fischer, Rolf-Hartmuth	Heidelberg		DE	
Melder, Johann-Peter	Bohl-Iggelheim		DE	
Maixner, Stefan	Schwetzingen		DE	

Bassler, Peter	Viernheim	DE
Luyken, Hermann	Ludwigshafen	DE

US-CL-CURRENT: 528/312; 540/539

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw De

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☐ 3. Document ID: US 20030054945 A1

L3: Entry 3 of 16 File: PGPB Mar 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030054945
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030054945 A1

TITLE: Catalyst for use in producing lower aliphatic carboxylic acid ester, process for producing the catalyst, and process for producing lower aliphatic carboxylic and ester using the catalyst

PUBLICATION-DATE: March 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kadowaki, Etsuko	Oita-shi		JP	
Narumi, Kousuke	Oita-shi		JP	
Uchida, Hiroshi	Oita-shi		JP	

US-CL-CURRENT: 502/150; 502/162, 502/255, 502/305

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw De

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☐ 4. Document ID: US 6699960 B1

L3: Entry 4 of 16 File: USPT Mar 2, 2004

US-PAT-NO: 6699960
DOCUMENT-IDENTIFIER: US 6699960 B1

TITLE: Method for producing polyamides from dinitriles and diamines

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw De

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☐ 5. Document ID: US RE38283 E

L3: Entry 5 of 16 File: USPT Oct 21, 2003

US-PAT-NO: RE38283
DOCUMENT-IDENTIFIER: US RE38283 E

TITLE: Catalyst for use in producing carboxylic esters

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 6. Document ID: US 6362355 B1

L3: Entry 6 of 16 File: USPT Mar 26, 2002

US-PAT-NO: 6362355
DOCUMENT-IDENTIFIER: US 6362355 B1

TITLE: Molybdated dispersants from heteropoly acids

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 7. Document ID: US 6350896 B1

L3: Entry 7 of 16 File: USPT Feb 26, 2002

US-PAT-NO: 6350896
DOCUMENT-IDENTIFIER: US 6350896 B1

TITLE: Process for preparation of an ester using a polyaniline salt as catalyst

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 8. Document ID: US 6316659 B1

L3: Entry 8 of 16 File: USPT Nov 13, 2001

US-PAT-NO: 6316659
DOCUMENT-IDENTIFIER: US 6316659 B1

TITLE: Method for producing cyclopentanone and cyclopentene-1-carboxylic acid and their esters

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 9. Document ID: US 6313358 B1

L3: Entry 9 of 16 File: USPT Nov 6, 2001

US-PAT-NO: 6313358
DOCUMENT-IDENTIFIER: US 6313358 B1

TITLE: Method for producing hexanediol

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 10. Document ID: US 6222033 B1

L3: Entry 10 of 16 File: USPT Apr 24, 2001

US-PAT-NO: 6222033
DOCUMENT-IDENTIFIER: US 6222033 B1

TITLE: Method for producing cyclic lactams

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC

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Terms	Documents
L2 and silica	16

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Search Results - Record(s) 11 through 16 of 16 returned.

☐ 11. Document ID: US 6169192 B1

Using default format because multiple data bases are involved.

L3: Entry 11 of 16 File: USPT Jan 2, 2001

US-PAT-NO: 6169192
DOCUMENT-IDENTIFIER: US 6169192 B1

TITLE: Functionalized ferrocenyldiphosphines, a process for their preparation and their use

DATE-ISSUED: January 2, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pugin; Benoit	Munchenstein			CH
Landert; Heidi	Bourrignon			CH

US-CL-CURRENT: 556/11; 502/154, 502/155, 502/158, 556/12, 556/143, 556/144, 556/18, 556/22, 556/28

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw D

☐ 12. Document ID: US 6127307 A

L3: Entry 12 of 16 File: USPT Oct 3, 2000

US-PAT-NO: 6127307
DOCUMENT-IDENTIFIER: US 6127307 A
**** See image for Certificate of Correction ****

TITLE: Catalyst composition free from noble metals

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw D

☐ 13. Document ID: US 6040472 A

L3: Entry 13 of 16 File: USPT Mar 21, 2000

US-PAT-NO: 6040472
DOCUMENT-IDENTIFIER: US 6040472 A

TITLE: Catalyst for use in producing carboxylic esters

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 14. Document ID: US 6002010 A

L3: Entry 14 of 16 File: USPT Dec 14, 1999

US-PAT-NO: 6002010
DOCUMENT-IDENTIFIER: US 6002010 A

TITLE: Carboxylic acid derivative preparation process

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 15. Document ID: US 5693793 A

L3: Entry 15 of 16 File: USPT Dec 2, 1997

US-PAT-NO: 5693793
DOCUMENT-IDENTIFIER: US 5693793 A

TITLE: Preparation of caprolactam from 6-aminocapronitrile

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 16. Document ID: US 5416240 A

L3: Entry 16 of 16 File: USPT May 16, 1995

US-PAT-NO: 5416240
DOCUMENT-IDENTIFIER: US 5416240 A
**** See image for Certificate of Correction ****

TITLE: Preparation of poloxy-alkylene glycols

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

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Terms	Documents
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